

REMARKS

By the present amendments, the subject matter of claim 2 (minus algae) is incorporated into claim 1.

New claims 32-35 are added to identify specific types of enclosed or restricted flow areas that are treated according to the invention. New claim 36 makes previously objected to claim 25 into an independent form.

Claim 1, 2, 5, 7, 8, 16 and 18-24 have been rejected for anticipation or obviousness over the teachings of the Giddings article. Applicants respectfully traverse.

Giddings is an investigatory paper "on the effects of aromatic compounds on photosynthesis of freshwater alga." (1st paragraph). The tests, therefore, measured the inhibition of photosynthetic activity in algae by each of the tested compounds. See, paragraph 4 on page 360 and the first paragraph on p. 361 (algal community illuminated by fluorescent lights that stimulated photosynthesis). Exposure to the compound and tests occurred for only 2 hours (last paragraph on p. 361) followed immediately by tests to measure ¹⁴C fixation. The test results showed that the aromatic compounds inhibited photosynthesis (referred to by the label "toxicity" in the paper). Importantly, Giddings noted that the results showed the unpredictable nature of the inhibition effects: "However, the short term photosynthesis tests did not succeed in their objective of revealing broad trends in the toxicity of the aromatics tested." (top of p. 364)


In contrast, the present inventors have discovered that the claimed compounds will kill algae without exposure to light (required for photosynthesis) and will treat areas infected with more complicated organisms (e.g., molluscs and invertebrates). Exposure to UV will then degrade the aquatic compound to ineffective by-products in a matter of hours or days. Such an invention is particularly useful in an enclosed ballast water tank to prevent transplantation of undesirable species inadvertently picked up in another port when ballast water is taken in but discharged at a remote region. This method of use and treatment is neither shown nor suggested by Giddings. Moreover, independent claim 1 has been amended with a list of target pests that does not include algae. Giddings neither teaches nor suggests the effects of benzoquinones on aquatic species other than the one algae species tested for photosynthetic effect.

In the Application of:
CUTLER et al.
Serial No. 10/003,465

Docket No. 43257

Reconsideration and allowance are respectfully requested.

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